Title (en)

KEY TRANSFORMS TO DISCRIMINATE BETWEEN BEAMS IN A MULTI-BEAM SATELLITE COMMUNICATION SYSTEM

Title (de)

SCHLÜSSELTRANSFORMATIONEN ZUR UNTERSCHEIDUNG ZWISCHEN STRAHLEN IN EINEM MEHRSTRAHLSATELLITENKOMMUNIKATIONSYSTEM

Title (fr)

CHANGEMENTS DE CLES POUR FAIRE LA DISTINCTION ENTRE DES FAISCEAUX DANS UN SYSTEME DE COMMUNICATION PAR SATELLITE MULTIFAISCEAU

Publication

EP 1040599 B1 20030319 (EN)

Application

EP 98961983 A 19981208

Priority

- US 9826000 W 19981208
- US 543997 A 19971210

Abstract (en)

[origin: US6690798B1] A method and apparatus is described for transforming a key variable used for scrambling mobile data traffic between a terminal and a network in alternate ways based on a value transmitted to the terminal from the network. Transformation is accomplished by passing portions of the key variable through a series of S-boxes, which provide a mapping between inputs and outputs. The method and apparatus is explained also in the context of a satellite communications system, in which a terminal can be located in a different continent/country from the terminal's home location. Enciphered communication is enabled between the foreign satellite gateway and the roaming terminal after the foreign gateway communicates with the terminal's native gateway. The native gateway transmits one or more cipher variables in the communication. Moreover, the value determining which way to cipher the data traffic can be based on numerous factors, including aspects of the satellite communication system.

IPC 1-7

H04B 7/185; H04Q 7/38

IPC 8 full level

H04B 7/185 (2006.01); **H04L 9/08** (2006.01); **H04M 1/68** (2006.01); **H04Q 7/22** (2006.01); **H04Q 7/24** (2006.01); **H04Q 7/26** (2006.01); **H04Q 7/30** (2006.01); **H04Q 7/32** (2006.01); **H04Q 7/38** (2006.01); **H04W 12/00** (2009.01); H04M 1/724 (2021.01); H04M 1/725 (2006.01); H04W 88/02 (2009.01)

CPC (source: EP US)

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DOCDB simple family (application)

US 543997 A 19971210; AU 1716299 A 19981208; CA 2313548 A 19981208; CN 98813552 A 19981208; DE 69812415 T 19981208; EP 98961983 A 19981208; JP 2000524877 A 19981208; TW 87119190 A 19981119; US 9826000 W 19981208